

The opinion in support of the decision being entered today was not  
written for publication and is not binding precedent of the Board

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte BERND BRUCKMANN, STEFAN WOLFF,  
WOLFGANG HEIDER, JOACHIM JAEHME,  
WERNER LANGER AND HANS RENZ

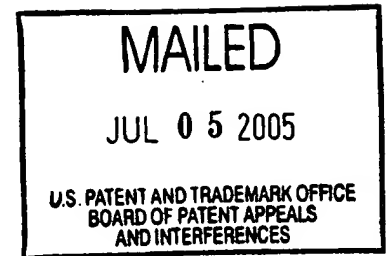
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Appeal No. 2005-1096  
Application 08/894,156<sup>1</sup>

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HEARD: JUNE 8, 2005

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Before KIMLIN, OWENS and JEFFREY T. SMITH, Administrative Patent Judges.

JEFFREY T. SMITH, Administrative Patent Judge.

**DECISION ON APPEAL**

This is an appeal under 35 U.S.C. § 134 from a final rejection of claims 1 to 5,  
8 to 11 and 13 to 17.<sup>2</sup>

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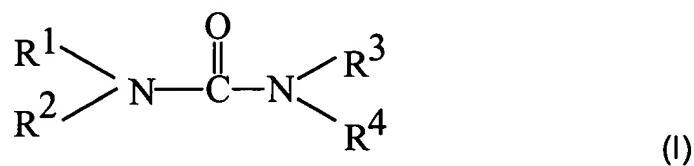
<sup>1</sup> Different claims from this application were the subject of Appeal No. 2000-1881.

<sup>2</sup> According to Appellants, Brief page 2, claims 12 and 18 have been indicated as containing allowable subject matter. However, the claims stand objected to.

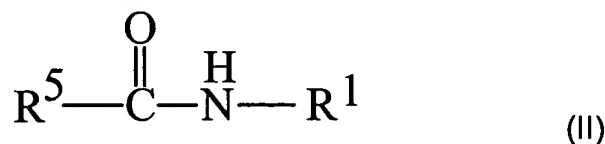
## BACKGROUND

The invention relates to a process for the preparation of a polyisocyanate which contains one or more biuret groups by reacting a) an aliphatic or cycloaliphatic isocyanate containing two or more isocyanate groups (isocyanate a) with b) a tertiary alcohol or a mixture of water and a tertiary alcohol (biuretizing agent b) at from 100 to 250°C. The reaction is carried out in the presence of a stabilizer consisting essentially of a catalytic amount of urea, ammonia, biuret, a urea derivative of a specified formula I, or a carboxamide of a specified formula II. (Appeal Brief, pages 2-3). Claim 1, which is illustrative of the subject matter on appeal, reads as follows:

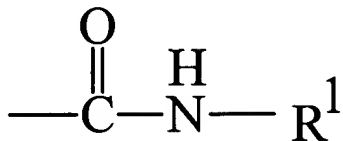
1. A process for the preparation of a polyisocyanate which contains one or more biuret groups by reacting
  - a) an aliphatic or cycloaliphatic isocyanate containing two or more isocyanate groups (isocyanate (a)) with
  - b) 0.5 to 20 mol% based on the isocyanate groups in (a) of a tertiary alcohol or a mixture of water and a tertiary alcohol (biuretizing agent (b)) at from 100 to 250°C, which comprises carrying out the reaction in the presence
  - c) from 0.01 to 2.0 mol% based on the isocyanate groups in (a) of a stabilizer (c) selected from the group consisting of urea, ammonia, biuret, ethylene urea, a urea derivative of the formula I



in which R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, and R<sup>4</sup> are hydrogen, C<sub>1</sub> to C<sub>10</sub> alkyl or C<sub>6</sub> to C<sub>10</sub> aryl, or a carboxamide of the formula II



in which R<sup>5</sup> is C<sub>1</sub> to C<sub>12</sub> alkyl which is unsubstituted or in which 1, 2, or 3 hydrogen atoms are replaced by a radical



#### THE REFERENCES

In rejecting the appealed claims under 35 U.S.C §103, the Examiner relies on the following references:

Hennig et al. (Hennig)	3,367,956	Feb. 6, 1968
Wagner et al. (Wagner I)	3,903,127	Sep. 2, 1975
Wagner et al. (Wagner II)	3,976,622	Aug. 24, 1976
Mohring et al. (Mohring I)	4,152,350	May 1, 1979
Mohring et al. (Mohring II)	4,192,936	Mar. 11, 1980

Claims 1 to 5, 8 to 11 and 13 to 17 stand rejected under 35 U.S.C. §103(a) as unpatentable over Mohring I or Mohring II in view of Wagner I or Wagner II and Hennig.

We have carefully reviewed the claims, specification and applied prior art, including all of the arguments advanced by both the Examiner and Appellants in support of their respective positions. This review leads us to conclude that the Examiner's rejection under 35 U.S.C. §§ 103(a) is not well founded.

Rather than reiterate the conflicting viewpoints advanced by the Examiner and the Appellants regarding the above-noted rejections, we make reference to Appellants' Brief filed February 05, 2004, Reply Brief filed July 19, 2004 and the Examiner's answer mailed May 19, 2004.

### DISCUSSION

Claims 1 to 5, 8 to 11 and 13 to 17 stand rejected under 35 U.S.C. §103(a) as unpatentable over Mohring I or Mohring II in view of Wagner I or Wagner II and Hennig.

The Examiner has found that Mohring I and II disclose the production of biuret containing polyisocyanates having a low unreacted polyisocyanate monomer content and light color. Diisocyanates are reacted with an alcohol component, including tertiary alcohols, an amine component, and water. The Examiner has additionally found that the claimed stabilizers were known to be useful agents for the production of biurets from Wagner I, Wagner II, and Hennig. (Answer, pp. 3-4).

The Examiner concluded that it would have been obvious to one of ordinary skill in the art to substitute the nitrogen-containing biuretizing agents of the secondary references for the amine component of Mohring I or II as one would have reasonably expected the nitrogen-containing compounds of the primary and secondary references to function as equivalents. (Answer, p. 4).

The Appellants state that their claims define over the references due to the fact that the stabilizer (c) is present in a maximum amount of 2.0 mol% on the isocyanate groups in (a).<sup>3</sup> Appellants also state that “the maximum amount of stabilizer of the present claims is less than the minimum amount of biuretizing agent necessary, as disclosed by Wagner et al. [sic, I or II]. In addition. . . , the substituted

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<sup>3</sup> The scope of the present claims on appeal differs from the claims of the previous appeal, *inter alia*, by specifying the maximum amount of stabilizer.

urea [of Henning] is present in an amount of at least 10 mol% based on the diiocyanate.” (Brief, p. 7).

Appellants assert that the data presented in the specification, Table I, provides evidence that the amount of stabilizer specified in the present claims provides unexpected results such as greater viscosity and greater color number. (Brief, pp. 9-13).

The Examiner, relying in part on our previous decision, asserts that the data in the specification does not distinguish over the use of equivalent compounds which are used in comparable amounts within the process. (Answer, p. 5).

We do not agree. The scope of the present claims is not the same as the claims in the previous appeal. The discussion of the previous appeal recognized that the appealed claims did not exclude additional amounts of other biuretizing agents other than tertiary alcohol and water. (Decision, p. 9). However, the present claims provide amounts for the stabilizer and the biuretizing agents.

To establish a *prima facie* case of obviousness the Examiner must show that the applied references themselves would have provided one of ordinary skill in the art with both a motivation to carry out the Appellants' claimed invention and a reasonable expectation of success in doing so. See *In re Vaeck*, 947 F.2d 488, 493, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991); *In re O'Farrell*, 853 F.2d 894, 902, 7 USPQ2d 1673, 1680 (Fed. Cir. 1988). Motivation for one of ordinary skill in the art to use the combination of a stabilizer along with biuretizing agents in the amounts as required by the presently claimed invention is required. The Examiner has not provided evidence or technical reasoning which shows or suggests the use of

the combination of a stabilizer along with biuretizing agents in the amounts as required by the presently claimed invention.

In light of the foregoing and for the reasons expressed in the Briefs, it is our determination that the Examiner has not established a *prima facie* case of obviousness with respect to the argued claims on appeal. The rejection of claims 1 to 5, 8 to 11 and 13 to 17 under 35 U.S.C. §103(a) as unpatentable over Mohring I or Mohring II in view of Wagner I or Wagner II and Hennig is reversed.

#### Summary of Decision

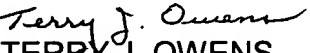
The rejection of claims 1 to 5, 8 to 11 and 13 to 17 under 35 U.S.C. §103 (a) is reversed.

**CONCLUSION**

For the foregoing reasons and those set forth in the Briefs, based on the totality of the record, we determine that the rejection under 35 U.S.C. § 103 is reversed.

**REVERSED**

  
EDWARD C. KIMLIN  
Administrative Patent Judge

  
TERRY J. OWENS  
Administrative Patent Judge

  
JEFFREY T. SMITH  
Administrative Patent Judge

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